REMARKS

Claims 1-33 are pending in the application.

Claims 1-33 stand rejected.

Rejection of Claims under 35 U.S.C. § 102

Claims 1-12, 15-18, 21-24 and 27-32 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Trimmer, et al., U.S. Patent Publication No. 2004/0111251 (Trimmer). Applicant respectfully traverses this rejection because Trimmer fails to teach a "virtual device interface coupled to control ... said secondary storage unit," as recited in claim 1. Trimmer's physical tape libraries (PTLs) are comparable to secondary storage units, and Trimmer's virtual tape libraries (VTLs) are comparable to primary storage units. (*See* Trimmer, paragraphs 1-5). Trimmer discloses an emulation model within a VTL. (*See* Fig. 2). According to Trimmer, "a VTL is a disk based repository or storage medium [i.e., a primary storage unit]." Thus, Trimmer's emulation model is coupled to a primary storage unit, the VTL, but is not coupled to a secondary storage unit, such as a tape drive. Applicant is unable to find anywhere that Trimmer shows, teaches or suggests that the emulation module is coupled to control to a secondary storage unit.

The Office action asserts, "Trimmer clearly describes the DPA and emulation module comprises of [sic] a virtual device interface that can control the physical secondary storage device by sending it the translated commands." Page 3. Applicant disagrees with this assertion of the Office action for two main reasons. First, the Office action attempts to combine Trimmer's DPA and emulation module together to create a virtual device interface. However,

such a combination is not justified by the teachings of Trimmer and actually confuses the roles of the emulation module and the DPA. Second, Trimmer does not teach that either the emulation module or the DPA is coupled to control said primary storage unit and said secondary storage unit; thus, even a combination of the emulation module and the DPA would fail to be coupled to control said primary storage unit and said secondary storage unit. Each of these deficiencies of Trimmer will be addressed independently in the following discussion.

The disclosure of Trimmer teaches away from combining the DPA and the emulation module in the manner suggested by the Office action. The Office action states, "The application DPA and emulation module providing interface [sic] not only for common device interfaces such as SCSI or FC but it also intercept [sic] a command." This statement suggests that the DPA and emulation module work together as some type of virtual interface; in contrast, Trimmer shows that the emulation module is a VTL's interface with the DPA. Thus, while it might be said that Trimmer intercepts a command from the DPA, it is unclear what commands a combination of the DPA and the emulation module could intercept.

Applicant also submits that Trimmer does not teach that the DPA and emulation module "control the physical secondary storage device by sending it the translated commands," as asserted by the Office action on page 3. According to Trimmer, the DPA sends commands, the emulation module receives the commands, and the emulation module then "translates the relevant DPA commands to the format of the VTL so that the commands sent by the DPA may be carried out in the VTL." Fig. 1 and Paragraph 23. The commands are translated so that they can be used by a virtual tape library, not a physical tape library. Thus, Trimmer could not be expected to, and in fact does not, teach sending translated commands to a secondary storage device (i.e., a PTL).

Even if the DPA and the emulation module could be combined in the manner suggested by the Office action (which Trimmer teaches against), when the emulation module is being used neither the emulation module nor the DPA is coupled to control a secondary storage unit (e.g., a physical tape drive). According to the Office action, "Trimmer's page 4, paragraph 32 describes the code in the data protection application DPA and emulation module providing interface . . . [to] intercept a command and providing the translated commands to the real physical storage device." Page 3. Trimmer actually teaches exactly the opposite. The last sentence of paragraph 31 provides a context for the discussion in paragraph 32 and states, "The emulation module acknowledges the commands of the DPA despite the fact that any instructions pertaining to the movement of the typical components of a PTL were *emulated and not actually performed physically*." Emphasis added. Thus, instead of teach "providing the translated commands to the real physical storage device," Trimmer teaches that "the commands . . . were emulated and not actually performed physically."

Paragraph 32 addresses how the emulation module acknowledges the commands, but does not teach "providing the translated commands to the real physical storage device." Paragraph 32 states:

> Acknowledging the DPA's commands satisfied the DPA and allows the DPA to send subsequent commands. The commands sent by the DPA are typically low-level commands such as SCSI commands or FC network commands (FC infrastructures are based on SCSI commands but allow for more flexible network topologies). Other interfaces may also be possible, such us [sic], for example, IP-based protocols (such as iFC, ISCSI, etc.). The emulation module responds to DPA commands on the same level as they are sent. Furthermore, the emulation module only utilizes tape library commands that are required by the DPA to communicate with or write data to a PTL. As a consequence, the emulation module does not need to emulate every command of a PTL but only commands that are actually used by the supported DPAs. This enables the emulation module to be configured to emulate the necessary commands for a wide variety of PTLs and DPAs with minimal overhead.

Paragraph 32 discusses PTL commands in the context of emulating the commands so that they may be sent between the DPA and the emulation module, but says nothing about providing commands to a physical tape library.

Applicant also notes that Fig. 2 shows a DPA connected to a VTL, with the VTL containing the emulation module. But Fig. 2 does not show the DPA or the emulation module being connected to a PTL. Indeed, neither figure in Trimmers shows a PTL. Thus, Applicant is unable to find anywhere in Trimmer that shows, teaches, or suggests "said virtual device interface is coupled to control said primary storage unit and said secondary storage unit."

The Office action appears to suggest that a DPA could be coupled to a PTL at the same time that the emulation module is coupled to a VTL. While Trimmer does not address this situation, in such a situation the DPA would need to issue commands to both the emulation module and the PTL. Thus, the DPA would have to be modified to determine when to send commands to the PTL and when to send commands to the emulation module. Trimmer does not address such a situation because Trimmer seeks to facilitate communication between "an *existing* DPA and a disk based virtual tape library." Paragraph 6, emphasis added.

Applicant submits that even if the Office action's assertions about Trimmer are correct, which Applicant does not concede, claim 1 still distinguishes over the Office action's characterization of Trimmer. This is because claim 1 provides a virtual device interface that is coupled to control both a primary storage unit and a secondary storage unit. In such a situation, a backup application (such as a DPA), would not have to be modified to determine whether to send commands to a virtual device interface or a secondary storage unit. This provides significant advantages over the Office action's characterization of Trimmer. For example, "In application,

such a system can provide better performance than would be possible using a physical tape library, with the added advantage of more robust recovery. Several times a day (much more often than would be feasible with a physical tape library), user information can be backed-up to one or more virtual tapes. Then, on a daily basis (e.g., at night), the information backed-up on the virtual loader's virtual tapes can be backed-up to a physical tape library." Specification, paragraph 63. These advantages are provided when a "virtual device interface is coupled to control said primary storage unit and said secondary storage unit," as recited in claim 1.

In conclusion, Claim 1 distinguishes over Trimmer by reciting a "virtual device interface, wherein said virtual device interface is configured to allow a primary storage unit to be accessed as a secondary storage unit, and said virtual device interface is coupled to control said primary storage unit and said secondary storage unit." Accordingly, Applicant submits that independent claim 1 is allowable over Trimmer. Applicant submits that independent claims 10, 16, 22, and 28 are allowable for at least the same reasons claim 1 is allowable. Therefore, Applicant submits that independent claims 1, 10, 16, 22, and 28, as well as claims 2-9, 11, 12, 15, 17-21, 23, 24, 27, 29, 30, and 33, which depend from claims 1, 10, 16, 22, and 28, are in condition for allowance.

Rejection of Claims under 35 U.S.C. § 103

Claims 13, 14, 19, 20, 25, 26, 31 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Trimmer, et al., U.S. Patent Publication No. 2004/0111251 (Trimmer) and further in view of Anna, et al., U.S. Patent Publication No. 2004/0078639 (Anna).

Claims 13, 14, 19, 20, 25, 26, 31, and 32 depend from independent claims 10, 16, 22, and 28. Therefore, claims 13, 14, 19, 20, 25, 26, 31, and 32 are patentable for at least the same reasons that claims 10, 16, 22, and 28 are patentable. Accordingly, Applicant requests

withdrawal of the rejections based on 35 U.S.C. § 103. Applicant therefore submits that claims 13, 14, 19, 20, 25, 26, 31, and 32 are in condition for allowance.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5084.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on November 3, 2005.

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